

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE		PAGE OF PAGES 1 5	
2. AMENDMENT/MODIFICATION NO. 0355		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO.	
5. PROJECT NO. (If applicable)		6. ISSUED BY Office of River Protection U.S. Department of Energy Office of River Protection P.O. Box 450 Richland WA 99352		7. ADMINISTERED BY (If other than Item 6) Office of River Protection U.S. Department of Energy Office of River Protection P.O. Box 450 MS: H6-60 Richland WA 99352	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) WASHINGTON RIVER PROTECTION SOLUTIONS LLC Attn: BRIAN THOMAS C/O URS ENERGY & CONSTRUCTION, INC. PO BOX 73 / 720 PARK BLVD BOISE ID 837290073		9A. AMENDMENT OF SOLICITATION NO. (x)		9B. DATED (SEE ITEM 11)	
CODE 806500521		FACILITY CODE		10A. MODIFICATION OF CONTRACT/ORDER NO. DE-AC27-08RV14800	
				10B. DATED (SEE ITEM 13) 05/29/2008	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)
See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: FAR 52.243-2 Changes-Cost Reimbursement (AUG 1987)
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not. ☒ is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

See continuation pages.

FOB: Destination

Period of Performance: 06/20/2008 to 09/30/2016

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) Katie Downing		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Wade E. Hader	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)		16B. UNITED STATES OF AMERICA (Signature of Contracting Officer)	
15C. DATE SIGNED 11/18/15		16C. DATE SIGNED 18 Nov 2015	

Purpose of Modification:

The purpose of this supplemental agreement is to definitize Change Proposal number CP-14-006 (WRPS-1400931 R3, dated July 29th, 2014) for the AY-102 Recovery Pumping and Execution Plan, Phase 2 and incorporate the statement of work as modified through negotiations, documented in WRPS-1505264, e-mail dated June 11th, 2015, in accordance with FAR 52.243-2, Changes-Cost Reimbursement (AUG 1984).

1. This modification updates Section B as follows:

- 1.1 Incorporate cost and fee for the AY-102 Recovery Pumping and Execution Plan, Phase 2. The addition of this new scope increases costs in the amount of \$93,719,922 and fee in the amount of \$6,677,468, for a total increase in contract value of \$100,397,390. The costs and fee are incorporated in the B.4-1 Table by sub-Contract Line Item Number (CLIN) and Fiscal Year (FY) as follows:

CP-14-006 - AY-102 - Phase 2	FY2014	FY2015	FY2016	Option Period 1 Total	FY2017	Option Period 2 Total	Total
SubCLIN 1.2.1 - Safe, Compliant	\$ 1,915,195	\$ 42,831,398	\$ 27,126,756	\$ 71,873,349	\$ 5,056,896	\$ 5,056,896	\$ 76,930,245
SubCLIN 1.2.2 - Base Operations Indirect Costs (G&A Only)	\$ 286,056	\$ 6,443,207	\$ 4,284,592	\$ 11,013,855	\$ 808,619	\$ 808,619	\$ 11,822,474
SubCLIN 2.1 - Single Shell Tank	\$ -	\$ 878,101	\$ -	\$ 878,101	\$ -	\$ -	\$ 878,101
SubCLIN 6.1 - Hanford Employee Retirement & Benefit Plan Management	\$ 56,248	\$ 1,474,279	\$ 2,099,652	\$ 3,630,179	\$ 458,922	\$ 458,922	\$ 4,089,102
Subtotal Cost	\$ 2,257,500	\$ 51,626,985	\$ 33,511,000	\$ 87,395,485	\$ 6,324,437	\$ 6,324,437	\$ 93,719,922
Fee increase (pool)	\$ -	\$ -	\$ -	\$ 6,219,501	\$ -	\$ 457,967	\$ 6,677,468
Total Increase Cost plus Fee	\$ 2,257,500	\$ 51,626,985	\$ 33,511,000	\$ 93,615,386	\$ 6,324,437	\$ 6,782,404	\$ 100,397,390

- 1.2 As a result of this modification, the Contract Value is changed from \$5,817,848,760 to \$5,918,246,150. Section B, Table B.4-1, sub-CLIN 1.2.1, sub-CLIN 1.2.2, sub-CLIN 2.1, sub-CLIN 6.1 and Total Contract Price are changed as follows:

FROM:

Table B-4-1 Contract Cost and Contract Fee

CLIN	Sub-CLIN	Auth	Transition FY 2006	Base Period										Option Period 1			Option Period 2			Contract Totals
				FY 2006	FY 2010	FY 2011	FY 2012	FY 2013	Totals	FY 2014	FY 2015	FY 2016	Totals	FY 2017	FY 2018	Totals				
CLIN 1 Base Operations	1.1	A	5,484,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,484,000
	1.2	A	0	108,317,537	130,557,912	139,669,524	138,592,209	176,874,593	684,011,765	213,252,529	245,158,064	207,807,141	666,217,734	174,198,362	186,046,233	360,244,595	1,706,474,093	0	0	1,706,474,093
	1.3	A	0	28,503,468	33,281,799	30,647,691	44,176,895	44,811,205	152,426,079	49,680,255	68,583,817	68,221,493	182,478,565	313,404	32,766	346,170	365,251,702	0	0	365,251,702
CLIN 2 SST Relrv. & Closure	2.1	A	0	18,551,276	19,732,180	22,298,716	23,131,428	23,312,148	107,022,217	31,337,058	37,204,496	44,302,165	112,943,718	13,838,905	14,891,495	28,731,400	248,590,358	0	0	248,590,358
	2.2	A	0	57,403,068	72,752,511	75,625,974	84,295,755	94,640,864	354,722,172	57,460,029	104,793,501	94,862,147	257,115,677	68,944,891	43,603,204	113,548,095	785,385,946	0	0	785,385,946
	2.3	A	0	1,385,657	2,967,273	3,266,018	381,496	512,554	7,812,595	2,588,094	7,236,280	10,982,074	28,827,428	4,288,041	2,872,236	7,170,282	38,910,733	0	0	38,910,733
CLIN 3 WTP Support	3.1	A	0	7,873,882	17,498,036	20,512,679	38,090,531	28,740,486	110,615,614	31,749,229	31,774,950	33,280,594	98,804,812	10,877,864	5,000,841	15,878,705	223,405,832	0	0	223,405,832
	3.2	A	0	926,408	3,846,905	2,538,026	3,272,674	2,588,147	13,171,157	10,476,488	9,671,414	7,213,782	27,381,633	3,472,236	3,541,720	7,014,017	47,543,537	0	0	47,543,537
	3.3	A	0	829,800	3,462,842	2,535,361	3,317,522	303,605	10,454,929	3,820,597	3,902,398	2,916,884	10,450,230	25,277,082	19,707,852	44,985,044	65,850,263	0	0	65,850,263
CLIN 4 Supplemental Treatment	4.1	A	0	158,274	544,884	1,787,451	4,212,563	39,542	6,743,117	3,410,480	6,171,319	2,528,162	12,108,950	-791	0	-791	18,852,217	0	0	18,852,217
	4.2	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4.3	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLIN 5 Early Feed & Operation of the WTP LAW	5.1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5.2	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5.3	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLIN 6 Pension & Welfare Plans	6.1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6.2	A	0	14,203,459	19,021,014	18,942,123	23,321,035	26,846,072	100,385,732	33,177,894	36,767,500	35,632,432	105,577,827	39,592,180	43,484,374	83,076,553	208,643,662	0	0	208,643,662
	6.3	A	0	71,526,845	146,785,066	90,633,410	79,044,602	122,161,289	510,151,241	123,154,682	118,009,763	113,994,558	365,183,483	109,913,485	106,518,695	216,430,161	1,061,740,401	0	0	1,061,740,401
Contract Availible Fee Contract Price	7.1	A	5,484,000	310,787,883	452,648,115	415,001,865	440,825,030	526,012,575	2,146,375,289	568,398,148	682,998,393	649,503,070	1,411,870,611	693,773,628	565,468,270	1,175,241,898	5,237,861,776	0	0	5,237,861,776
	7.2	A	0	14,902,548	21,704,822	19,889,711	21,142,750	24,624,804	102,174,894	25,073,192	30,000,000	TBD	93,455,834	TBD	TBD	57,374,005	265,904,635	0	0	265,904,635
	7.3	A	0	325,680,231	474,352,988	434,901,576	462,057,780	550,537,379	2,257,548,553	594,441,340	722,989,393	TBD	2,006,328,545	TBD	TBD	1,232,615,905	6,480,986,413	0	0	6,480,986,413
CLIN 7 American Recovery and Reinvestment Act (ARRA)	7.4	A	0	18,542,771	82,638,778	87,820,546	0	0	169,050,455	0	0	0	0	0	0	0	189,060,452	0	0	189,060,452
	7.5	A	0	2,444,842	15,043,442	17,382,721	0	0	34,370,504	0	0	0	0	0	0	0	34,370,504	0	0	34,370,504
	7.6	A	0	3,559,231	20,087,000	26,950,992	0	0	50,637,222	0	0	0	0	0	0	0	50,637,222	0	0	50,637,222
ARRA Sub-Totals	7.7	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7.8	A	0	820,051	2,960,294	4,272,691	0	0	8,053,036	0	0	0	0	0	0	0	8,053,036	0	0	8,053,036
	7.9	A	0	0	8,620,572	10,278,267	0	0	18,898,839	0	0	0	0	0	0	0	18,898,839	0	0	18,898,839
Contract Availible Fee Contract Price	8.1	A	0	25,406,695	128,408,075	146,705,577	0	0	301,520,347	0	0	0	0	0	0	0	331,520,347	0	0	331,520,347
	8.2	A	0	2,853,000	11,180,000	8,303,000	0	0	22,342,000	0	0	0	0	0	0	0	22,342,000	0	0	22,342,000
	8.3	A	0	28,295,695	140,588,075	155,014,577	0	0	323,892,347	0	0	0	0	0	0	0	323,892,347	0	0	323,892,347
Contract Availible Fee Contract Price	9.1	A	5,484,000	336,194,379	562,056,190	581,707,442	440,925,030	526,012,575	2,419,335,616	568,398,148	682,998,393	649,503,070	1,411,870,611	608,773,628	565,468,270	1,175,241,898	5,538,502,125	0	0	5,538,502,125
	9.2	A	0	17,755,548	32,884,882	28,208,711	21,142,750	24,624,804	124,516,684	25,073,192	30,000,000	TBD	93,455,834	TBD	TBD	57,374,005	279,345,638	0	0	279,345,638
	9.3	A	0	353,949,926	614,941,072	589,916,153	462,057,780	550,537,379	2,571,412,310	594,441,340	722,989,393	TBD	2,006,328,545	TBD	TBD	1,232,615,905	6,817,046,781	0	0	6,817,046,781

TO:

Table B.4-1 Contract Cost and Contract Fee

CLIN	Sub-CLIN	Auth	Transition	Base Period				Option Period 1				Option Period 2				Contract Totals	
				FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Totals	FY 2014	FY 2015	FY 2016	Totals	FY 2017	Totals		
CLIN 1	1.1	A	5,494,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1.2.1	A	0	108,317,537	130,557,912	139,669,524	138,592,209	176,874,583	654,511,755	215,167,725	287,989,462	234,933,885	738,091,683	179,255,258	166,046,233	343,301,490	1,771,404,330
	1.2.2	A	0	29,509,468	33,281,799	30,647,681	44,176,825	44,811,205	182,525,978	48,979,311	73,007,024	70,506,075	193,492,410	1,122,023	32,766	1,154,788	377,074,178
	1.3	A	0	18,351,276	19,732,180	22,296,216	23,131,428	23,312,148	107,023,247	31,337,058	37,204,496	44,302,165	112,843,718	13,539,905	14,891,495	28,731,400	245,536,364
CLIN 2 SST	2.1	A	0	57,403,088	72,732,511	75,625,974	84,296,755	94,643,664	364,722,172	57,480,029	105,671,602	94,862,147	257,944,719	69,944,891	43,603,204	113,546,095	765,264,046
	2.2	A	0	1,385,657	2,367,273	3,265,018	381,486	512,564	7,512,959	2,599,094	7,236,260	10,992,074	20,627,428	4,298,041	2,872,326	7,170,368	38,510,752
CLIN 3	3.1	A	0	7,973,682	17,498,036	20,512,679	36,080,531	28,740,468	110,915,414	31,749,229	31,774,990	33,280,594	98,804,812	10,877,864	5,030,841	15,878,705	223,494,532
	3.2	A	0	926,406	3,946,905	2,538,026	3,272,674	2,588,147	13,171,157	10,476,468	9,671,414	7,213,782	27,334,633	3,472,268	3,541,720	7,014,017	37,346,657
	3.3	A	0	829,600	3,462,842	2,535,361	3,317,522	309,605	10,456,829	3,620,997	3,902,398	2,916,894	10,440,290	25,777,092	19,707,952	44,985,044	95,760,261
	3.4	A	0	158,274	544,884	1,787,451	4,212,966	39,542	6,742,117	3,410,480	6,171,319	2,528,162	12,108,650	-791	0	791	18,802,267
CLIN 4	4.1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4.2	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4.3	A	0	0	2,798,664	8,547,404	976,925	4,795,858	17,111,850	5,053,483	6,051,885	9,983,424	21,608,792	2,460,350	2,528,522	4,988,912	43,166,562
	4.4	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLIN 5	5.1	A	0	2,412	0	0	110,034	375,222	467,665	702,530	0	0	702,530	0	0	0	1,190,200
	5.2	A	0	0	0	0	0	0	0	3,680,340	19,693,987	19,768,215	43,142,541	1,893,856	0	1,893,856	46,036,397
	5.3	A	0	0	0	0	0	0	0	0	0	0	0	22,412,079	22,927,556	45,339,635	45,339,635
	5.4	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLIN 6 Pension & Welfare Plans	6.1	A	0	14,203,469	19,021,014	16,942,123	23,321,065	26,848,072	100,345,732	33,234,142	38,241,779	37,732,085	134,314,585	131,280,594	263,595,179	263,595,179	263,595,179
	6.2	A	0	71,526,845	146,785,096	90,633,410	79,044,602	122,161,289	510,191,241	123,154,662	118,009,763	113,994,568	355,156,163	40,051,082	43,484,374	83,535,456	533,771,181
	Contract Cost		5,494,000	310,787,683	452,648,115	415,031,865	440,925,030	526,012,575	2,458,375,289	571,625,046	744,626,378	683,014,070	1,999,268,003	616,098,065	565,468,270	1,181,568,336	3,331,701,716
	Contract Price		5,494,000	325,690,231	474,352,998	434,931,576	462,067,780	550,537,379	2,267,546,813	25,073,192	30,000,000	TBD	102,675,335	TBD	TBD	1,239,397,990	2,262,662,101
CLIN 7	7.1	A	0	18,542,771	82,665,778	87,820,906	0	0	180,693,465	596,698,940	774,626,378	TBD	1,239,397,990	TBD	TBD	1,239,397,990	2,262,662,101
	7.2	A	0	2,444,642	15,043,442	17,382,721	0	0	34,070,934	0	0	0	0	0	0	0	180,000,451
	7.3	A	0	3,699,231	20,087,000	26,990,992	0	0	93,537,222	0	0	0	0	0	0	0	34,870,661
	7.4	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62,537,221
ARRA	7.5	A	0	820,051	2,960,264	4,272,681	0	0	8,053,023	0	0	0	0	0	0	0	8,053,023
	7.6	A	0	0	8,620,572	10,278,267	0	0	16,898,838	0	0	0	0	0	0	0	16,898,838
	Contract Cost		0	25,406,695	129,408,075	146,705,577	0	0	301,820,517	0	0	0	0	0	0	0	517,536,541
	Contract Price		0	2,653,000	11,180,000	8,309,030	0	0	22,312,000	0	0	0	0	0	0	0	72,347,000
ARRA	7.7	A	0	28,259,695	140,598,075	155,014,577	0	0	392,832,347	0	0	0	0	0	0	0	392,832,347
	7.8	A	0	336,194,379	582,068,190	561,707,442	440,925,030	526,012,575	2,446,382,915	571,625,046	744,626,378	683,014,070	1,562,266,075	616,098,065	565,468,270	1,181,568,336	5,033,222,611
	Contract Cost		5,494,000	336,194,379	582,068,190	561,707,442	440,925,030	526,012,575	2,446,382,915	571,625,046	744,626,378	683,014,070	1,562,266,075	616,098,065	565,468,270	1,181,568,336	5,033,222,611
	Contract Price		0	17,755,548	32,894,882	28,208,711	21,142,750	24,524,804	124,916,984	25,073,192	30,000,000	TBD	102,675,835	TBD	TBD	57,831,576	215,024,101
Contract Totals			5,494,000	353,949,926	614,941,072	589,916,153	462,067,780	550,537,379	2,571,412,310	596,698,940	774,626,378	TBD	2,101,841,931	TBD	TBD	1,239,397,990	5,016,213,151

2. Attached to this modification are:

- Attachment 1 - Replacement Page for Section B, page B-6 and
- Attachment 2 - AY-102 Settlement Agreement Risk and Opportunity List

3. FAR 43.204(c)(2) - Contractor's Statement of Release -

In consideration of the modification agreed to herein as complete equitable adjustments for the incorporation of Change Proposal number CP-14-006 (WRPS-1400931 R3, dated July 29th, 2014) for the AY-102 Recovery Pumping and Execution Plan, Phase 2, the Contractor hereby releases the Government from any and all liability under this contract for further equitable adjustments attributable to such facts or circumstances giving rise to these "proposals for adjustment," except for those items specifically noted in the proposal and other items not reasonably contemplated by the parties at the time of proposal definitization including and/or in addition to the specific items as follows:

- Potential regulatory requirements enforced by the Department of Ecology regarding additional ammonia monitoring
- Events related to AP02A Pump Removal Interruption and Recovery
- Items contained in the AY-102 Settlement Agreement Risk and Opportunity List in Attachment 2 of this modification

4. All other Terms and Conditions remain unchanged.

Attachment 1

DE-AC27-08RV14800, MODIFICATION 355

Replacement Page

(Total: Two (2) including this Cover Page)

- **Section B, Page B-6**

Table B-A-1 Contract Cost and Contract Fee

Table B.4-1 Contract Cost and Contract Fee																	
CLIN	Sub-CLIN	Auth	Transition	Base Period				Option Period 1				Option Period 2				Contract Totals	
				FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Totals	FY 2014	FY 2015	FY 2016	Totals	FY 2017	FY 2018	Totals	Totals
CLIN 1 Base Operations	1.1	A	5,494,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1.2.1	A	0	108,317,537	139,889,524	138,592,239	176,874,583	954,011,755	215,167,725	287,989,482	234,933,886	759,091,693	179,255,258	186,046,233	945,301,480	0	5,454,363
	1.2.2	A	0	29,509,468	33,281,799	30,947,681	44,176,825	44,811,205	182,425,978	49,979,311	73,007,024	70,508,075	193,492,410	1,122,023	32,768	1,154,769	1,777,404,339
CLIN 2 SST Renov. & Closure	1.3	A	0	18,551,276	19,732,180	22,298,216	23,131,428	23,312,148	107,025,247	31,337,058	37,204,496	44,302,165	112,843,718	13,638,905	14,891,495	28,731,400	246,568,366
	2.1	A	0	57,403,068	72,752,511	75,625,974	84,268,755	94,643,884	384,722,172	57,480,029	105,671,602	94,882,147	257,993,778	69,944,891	43,803,204	113,546,098	796,264,048
	2.2	A	0	1,385,657	2,387,273	3,266,018	381,496	512,554	7,912,958	2,589,094	7,238,280	10,982,074	20,827,420	4,296,041	2,872,326	7,170,368	35,910,785
CLIN 3 WTP Support	3.1	A	0	7,973,682	17,498,038	20,512,679	38,080,531	28,740,486	110,815,414	31,749,229	31,774,990	33,280,594	95,304,012	10,877,864	5,000,841	15,878,705	223,488,932
	3.2	A	0	926,406	3,845,905	2,538,026	3,272,674	2,588,147	13,171,157	10,478,468	9,671,414	7,213,782	27,361,663	3,472,296	3,541,720	7,014,017	47,548,372
	3.3	A	0	829,600	3,482,842	2,535,361	3,317,522	309,605	10,454,929	3,620,987	3,922,388	2,918,894	10,440,260	25,277,082	19,707,982	44,985,044	88,863,265
	3.4	A	0	158,274	544,884	1,787,451	4,212,936	38,542	6,743,117	3,410,480	6,171,319	2,528,182	12,108,550	-791	0	-791	18,022,227
CLIN 4 Supplemental Treatment	4.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4.3	A	0	2,798,664	8,547,404	976,925	976,925	4,795,858	17,118,629	5,063,483	6,051,885	9,903,424	21,095,792	2,460,390	2,528,522	4,993,912	32,193,554
	4.4	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLIN 5 Early Feed & Operation of the WTP LAW	4.5	0	0	2,412	0	0	110,094	375,222	487,663	702,630	0	0	702,630	0	0	0	1,193,294
	5.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLIN 6 Pension & Welfare Plans	5.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6.1	A	0	14,203,459	18,021,014	16,942,123	23,321,065	26,848,072	100,335,732	33,234,142	38,241,779	37,732,085	109,206,006	40,051,082	43,484,374	83,536,456	285,865,179
	6.2	A	0	71,526,845	148,785,096	90,833,410	79,044,802	122,161,289	510,151,241	123,154,862	118,009,783	113,994,558	365,158,933	109,913,485	108,516,886	216,430,181	285,879,192
	Contract Cost Available Fee ¹		5,494,000	310,787,683	452,848,115	415,001,865	440,925,030	526,012,575	2,145,375,269	571,625,648	744,626,378	693,014,070	1,939,266,096	616,098,065	565,488,270	1,181,566,336	1,671,740,402
CLIN 7 American Recovery and Renewment Act (ARRA)	Contract Price		5,494,000	325,660,231	474,352,998	434,301,578	482,067,780	550,537,379	2,217,549,953	593,663,840	774,626,378	TBD	2,102,875,835	TBD	TBD	57,831,574	282,612,105
	7.1	A	0	18,542,771	82,665,778	87,820,938	0	0	189,030,455	0	0	0	0	0	0	0	189,030,455
	7.2	A	0	2,444,642	15,043,442	17,382,721	0	0	34,870,884	0	0	0	0	0	0	0	34,870,884
	7.3	A	0	3,599,231	20,087,000	26,850,982	0	0	50,637,272	0	0	0	0	0	0	0	50,637,272
ARRA Sub-Totals	7.4	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7.5	A	0	820,051	2,880,284	4,272,691	0	0	8,053,025	0	0	0	0	0	0	0	8,053,025
	7.6	A	0	0	8,820,572	10,278,267	0	0	18,898,839	0	0	0	0	0	0	0	18,898,839
	Contract Cost Available Fee		0	25,403,695	129,408,075	146,705,577	0	0	301,520,347	0	0	0	0	0	0	0	301,520,347
Contract Totals	Contract Price		0	2,853,000	11,180,000	6,309,000	0	0	22,342,000	0	0	0	0	0	0	0	22,342,000
	Contract Cost		5,494,000	336,194,379	582,056,190	561,707,442	440,925,030	526,012,575	2,445,550,516	571,625,648	744,626,378	693,014,070	1,939,266,056	616,098,065	565,488,270	1,181,566,336	5,633,222,842
	Available Fee ¹		0	17,755,548	32,884,882	28,208,711	21,142,750	24,524,804	124,515,894	25,073,192	30,000,000	TBD	102,875,835	TBD	TBD	57,831,574	285,026,105
	Contract Price		5,494,000	353,949,928	614,941,072	589,916,153	482,067,780	550,537,379	2,571,412,310	593,668,840	774,626,378	TBD	2,101,941,931	TBD	TBD	1,239,367,939	5,918,248,777

Attachment 2

DE-AC27-08RV14800, MODIFICATION 355

**AY-102 Settlement Agreement Risk and
Opportunity List**

(Total: Five (5) including this Cover Page)

ATTACHMENT 2
AY-102 SETTLEMENT RISK AND OPPORTUNITY LIST
2015 RISK ASSESSMENT

Risk ID	Type	Status	Title	Owner	Description
AYSA-007	Risk	Open (Realized)	Radiological Conditions Worse Than Anticipated	Joint	Pits and other entries will be required in both AY-102 and AP-102 to install equipment and verify conditions prior to and during operations. A risk exists that radiological conditions are worse than anticipated and work is delayed or additional shielding is required at a cost and schedule impact.
AYSA-012	Risk	Open	Pits Require Cleanup to Remove Debris or Reduce Surface Contamination Levels	Joint	Multiple pits will be necessary to perform retrieval functions for AY-102. Many pits are known to be in poor condition in both AY and AP farms. A risk exists that the pit conditions are worse than anticipated and significant cleanup and debris removal is necessary in order to allow removal and installation activities to commence.
AYSA-013	Risk	Open (Realized)	As Found Field Conditions Differ From Expected	Joint	A risk exists that as found conditions differ from expected and rework is required at a cost and schedule impact to the project.
AYSA-041	Risk	Open (Realized)	Existing AY Ventilation System is Inadequate	Joint	The existing AY-AP ventilation systems will be used through the AY-102 Recovery Project. A risk exists that engineering evaluations determine that the existing system is inadequate to support the ventilation requirements for the field work and retrieval operations and upgrades are required.
AYSA-045	Risk	Open	Weather Conditions More Severe Than Expected	Joint	A risk exists that weather conditions are more severe than anticipated and work is delayed.
AYSA-049	Risk	Open	Excessive Waste Hold up In Equipment being Removed	Joint	Failed equipment will be removed from AY-102 and AP-102 tank risers. Failed equipment is known to have waste buildup. As part of the normal process of equipment removal spray wands are used to remove surface contamination. A risk exists that there is excessive waste hold up on the equipment internals and additional shielding or other preventative measures are required at an additional cost and schedule impact.
AYSA-052	Risk	Open (Realized)	Retrieval Operations Requires New Permit for AY-AP Farm Ventilation	Joint	AY-102 recovery has planned to operate the existing ventilation systems in AY and AP farm within the existing permits. The existing permits included tank mixing but did not include sluicing operations within the farms as part of the modeling for release of dimethyl mercury. A risk exists that sluicing is not adequately addressed under the existing models or permits and a new model/permit is required prior to operations.
AYSA-009	Risk	Open (Realized)	Tank Farm Vapors Require Additional Controls	ORP	The A Farm Complex has a history of vapor related work stoppages. The occurrence of vapor issues is difficult to predict. A risk exists that tank farm vapor issues result in anticipated work stoppages and the project cost and schedule is impacted.
AYSA-015	Risk	Open	Leaking Into Annulus Beyond Capacity of Annulus Pumping System	ORP	The AY-102 primary tank is slowly leaking waste into the tank annular space. As part of preparations for tank waste retrieval and during tank retrieval operations waste disturbing activities will be performed including equipment removal and installation and sluicing operations. Throughout the DOE high level waste complex there is a history of leaking tanks "self-sealing" as larger and heavier particles settle near the leak site and block or restrain the further release of liquid waste. A risk exists that the AY-102 primary tank leak worsens as part of project execution and/or operations.
AYSA-016	Risk	Open	Funding Not Available When Required	ORP	Funding is required for the project to execute scope required to meet settlement agreement milestones. A risk exists that adequate funding is not available when required and work is delayed or halted. If work is stopped additional costs are incurred as a result of project ramp up and ramp down.
AYSA-021	Risk	Open	No Technical Solution for Waste Retrieval (Residual Heel)	ORP	The AY-102 heel is expected to be similar to other tank heels and is anticipated to be a hard crust like material. Throughout retrieval operations there has been limited success in the removal of residual hard heels. Stakeholders have indicated the desire to inspect the possible leak site. A risk exists that the residual heel is unable to be mobilized and the residual heel cannot be retrieved.

ATTACHMENT 2
AY-102 SETTLEMENT RISK AND OPPORTUNITY LIST
2015 RISK ASSESSMENT

Risk ID	Type	Status	Title	Owner	Description
AYSA-024	Risk	Open (Realized)	Requirements Change	ORP	New engineering requirements. Unfunded directed changes. Project-initiated DSA Change Notices invoke unanticipated requirements, or new unanalyzed DSA hazards are discovered (e.g., what constitutes safety-significant equipment, transfer line pressure boundary changes, commercial grade item dedication, etc.)
AYSA-025	Risk	Open	Secondary Liner Failure	ORP	Waste has leaked from the primary liner of AY-102 into the secondary liner. The secondary liner is sound and waste has not leaked beyond the secondary liner. A risk exists that the secondary liner fails and containment is breached.
AYSA-026	Risk	Open	Selected Receipt Tank Changes	ORP	AY-102 waste will be retrieved to AP-102. Design work is ongoing to establish transfer routes. A risk exists that the selected receipt tank changes and rework is required at an additional cost and schedule impact.
AYSA-031	Risk	Open	Contract Direction and Advanced Work Authorizations are not Agreed Upon and Issued in a Timely Manner	ORP	Budget and contract scope authorization is necessary to allow WRPS to continue to execute project work. A risk exists that contract authorization and budget is not available when required and work scope is delayed.
AYSA-037	Risk	Open	Major Retrieval Equipment Fails During Retrieval (Slurry/supernatant pumps/sluicers)	ORP	Equipment will be procured and installed into AY-102 and AP-102 to support the retrieval operations. A risk exists that major equipment (slurry pumps, supernatant pumps, sluicers, etc.) fails and must be repaired or replaced at an additional cost and project schedule delay.
AYSA-040	Risk	Open	Additional Controls Required by DSA	ORP	The AY-102 Recovery project will perform an update to the DSA for the impacted areas to address any potential hazards associated with retrieval of a DST. DST Retrieval has not been performed at Hanford. A risk exists that the results of the hazards analysis indicate that additional controls are required to satisfy the safety basis.
AYSA-042	Risk	Open	Stakeholder approvals are not received when needed	ORP	Outside agencies do not meet the needs of the project. Outside agencies cannot come to agreement on terms for project completions.
AYSA-046	Risk	Open (Realized)	Pit Structural Conditions Worse Than Anticipated	ORP	Pits and other entries will be required in both AY-102 and AP-102 to install equipment and verify conditions prior to and during operations. A risk exists that pit structural conditions are worse than anticipated and additional work is required to repair or recoat pits prior to use.
AYSA-057	Risk	Open	Unable to Reach Agreement on Repair vs. Closure Approach Within 60 Days	ORP	The Settlement Agreement requires WRPS to provide within 60 days a report to ecology detailing the results of the tank inspection and outline the repair/closure process for the tank. A risk exists that this process and decision cannot be made with all parties in concurrence within the 60 day window.
AYSA-060	Risk	Open	Unable to Complete Submission of Contingency Plan/Monitoring Plan Revisions As Needed	ORP	WRPS is required to update the Contingency Plan and Monitoring Plan periodically throughout the Settlement Agreement Window. A risk exists that WRPS is unable to reach concurrence with all parties in a timely manner and submission of the plan(s) is delayed.
AYSA-002	Risk	Open	Waste Characterization Insufficient to Meet Needs	WRPS	Waste in AY-102 is from a variety of sources most notably from the retrieval of 241-C-103. A risk exists that the existing waste characterization is insufficient or inaccurate to meet the needs of process planning and execution for the retrieval process. If realized this would result in longer than expected retrieval times at a cost and schedule impact as well as potential impacts to Settlement Agreement milestones in the worst case.

ATTACHMENT 2
AY-102 SETTLEMENT RISK AND OPPORTUNITY LIST
2015 RISK ASSESSMENT

Risk ID	Type	Status	Title	Owner	Description
AYSA-004	Risk	Open	Waste Chemistry / Heat Control More Complex Than Anticipated	WRPS	The existing AY-102 ventilation system is an active ventilation system and was not specifically designed with retrieval operations as a necessary function. Behavior and waste characterization of AY- 102 have been extensively studied as part of the review and analysis of the leak cause. An increase in temperatures in AY-102 may lead to increased hazards, increased corrosion and to an increased leak rate as a result. Tank chemistry changes over time impact the waste heat load. A risk exists that tank chemistry changes result in increased heat loading and further damage AY- 102 primary tank or introduce new hazards.
AYSA-005	Risk	Open	Incident during field work results in safety stand down	WRPS	Field work throughout WRPS and on the Hanford site contains significant radiological and industrial hazards. A risk exists that safety incidents occur resulting in work stoppages and work is delayed.
AYSA-006	Risk	Open	Construction QA/QC Issues	WRPS	As part of construction turnover and facility acceptance testing inspections will be performed throughout the construction process. A risk exists that QA/QC issues are identified during construction and rework is required resulting in delays.
AYSA-008	Risk	Open	Cranes Not Available When Required	WRPS	Cranes will be required to remove and install equipment throughout the durations of construction and readiness activities. A risk exists that cranes are not available when required and field work is delayed at a cost and schedule
AYSA-010	Risk	Open	Pit Drain Seal Does Not Work	WRPS	Pit drains will utilize the standard seals to prevent liquid through transfer valve pits from reaching AY-102 and maintaining tank isolation. A risk exist that the pit drain seals do not perform as required.
AYSA-014	Risk	Open	Damage of AY-102 During Equipment Removal/ Installation	WRPS	Equipment will be removed and installed in AY-102 to prepare for retrieval operations. A risk exist that during this process AY-102 is damaged. In the worst case the structural integrity of the tank would be compromised and rework would be required at a cost and schedule impact. In most cases repair of damaged equipment would be required still resulting in cost and schedule impacts.
AYSA-017	Risk	Open	Insufficient DST Space to allow for retrieval	WRPS	Waste removed from AY-102 will be transferred to AP-102. In order for AP-102 to be capable of receiving AY-102 waste a series of waste transfers and evaporator campaigns are necessary. A risk exists that there is insufficient DST space to allow for retrieval and work is delayed.
AYSA-018	Risk	Open (Realized)	Insufficient Farm Infrastructure Available	WRPS	The AY-102 recovery project and settlement agreement activities require the use of tank farm infrastructure to complete and execute planned work scope. Infrastructure needed includes power, water, change trailers, etc. A risk exist that adequate tank farm infrastructure is not available when required and work is delayed and rework is required.
AYSA-022	Risk	Open	Temperature exceeds HIHTL or equipment limits	WRPS	Waste will be sluiced and removed from AY-102 via hose in hose transfer lines (HIHTL) using established technologies. AY-102 waste is known to be high heat waste. A risk exists that the waste removed from AY-102 exceeds established temperature limits and additional engineering work is required to accommodate the waste removal.
AYSA-023	Risk	Open	Lack of Thorough Preventative Maintenance Leads to Degradation of Equipment	WRPS	Equipment will be procured and installed into AY-102 and AP-102 to support the retrieval operations. A risk exists that major equipment (slurry pumps, supernatant pumps, sluicers, etc.) fails prior to use and must be replaced prior to use.
AYSA-030	Risk	Open	Failure to Maintain Control of Baseline Scope	WRPS	A risk exists that the AY-102 project fails to maintain alignment and control of the baseline project scope.
AYSA-032	Risk	Open	Execution of Other Critical Activities Delays AY-102	WRPS	AY-102 Recovery Project work will take place in the A Farm complex. Additionally the A complex will be undergoing upgrades to prepare for the retrieval of the next nine SSTs, providing feed for the evaporator to meet space gain requirements, and preparing to provide feed to the LAWPS.

ATTACHMENT 2
AY-102 SETTLEMENT RISK AND OPPORTUNITY LIST
2015 RISK ASSESSMENT

Risk ID	Type	Status	Title	Owner	Description
AYSA-033	Risk	Open (Realized)	Resources Unavailable When Required	WRPS	Personnel resources are required from a variety of organizations to support all phases of the AY-102 Recovery Project. A risk exists that key resources are unavailable when required and additional costs and schedule delays are incurred.
AYSA-034	Risk	Open	Equipment Vendors Fail to Perform as Required	WRPS	Sub-contractors will be used to support multiple activities throughout the project. A risk exists that sub-contractors fail to perform as required as rework is necessary at an additional cost and schedule delay.
AYSA-035	Risk	Open (Realized)	Failure of AY-AP Ventilation System	WRPS	The ventilation systems for AY and AP farms are necessary to support field work as well as the retrieval operations. A risk exists that the ventilation system fails and work is delayed while repairs are performed.
AYSA-036	Risk	Open	Service life of the retrieval equipment (e.g., HIHTL, pumps, PRVs, cameras, lights) for AY-102 cannot	WRPS	A risk exists that the service life of retrieval equipment is insufficient to support retrieval objectives.
AYSA-048	Risk	Open	222-S Laboratory Unable to Meet Sampling Demands	WRPS	The Settlement Agreement requires WRPS to process and analyze numerous samples and prepare and issue reports to Ecology. A risk exists that the Lab is unable to meet sampling and analysis requirements due to lab outages or equipment failures.
AYSA-050	Risk	Open	WIR Determination For Long Length Equipment Removal	WRPS	Failed equipment removed must undergo a Waste Incident to Reprocessing (WIR) evaluation process to validate the disposal path of the equipment. A risk exists that the results of the WIR determination differ from expected and an alternate disposal path is necessary.
AYSA-055	Risk	Open	AP Exhauster Replacement Not Complete When Required	WRPS	The AP Farm exhauster is in the process of being upgraded to support future missions. This upgrade is planned as part of the ongoing AP farm infrastructure improvements. The AY-102 project assumes that the new AP Farm Exhauster is installed, tested and operational (and permitted to accept retrieval waste from AY-102) before initiation of waste disturbing activities in AP-102. A risk exists that the AP exhauster is not available when required and project work is delayed along with commencement of retrieval operations.
AYSA-056	Risk	Open	Unable to Report Residual Volume Within 35 Days from Completion of Retrieval	WRPS	The Settlement Agreement requires WRPS to provide a report on Residual Waste Volume & Inspection Feasibility at the completion of the planned retrieval operations within 35 days. A risk exists that WRPS is unable to meet that deliverable resulting in penalties.
AYSA-058	Risk	Open	Unable to Provide Third Technology/Closure Recommendation within 30 days	WRPS	The Settlement Agreement Requires WRPS to provide a recommendation on deployment of a third technology or tank closure within 30 days of a decision that the tank cannot be inspected. A risk exists that we are unable to achieve that objective.
AYSA-059	Risk	Open	Unable to Report Residual Volume Within 60 Days from Completion of Third Technology	WRPS	The Settlement Agreement requires WRPS To provide a report on residual Waste Volume & Inspection Feasibility at the completion of the 3rd technology operations within 60 days. A risk exists that WRPS is unable to meet that deliverable resulting in penalties.
AYSA-061	Risk	Open	Unable to Sample and Report LDP as Required	WRPS	WRPS is required to sample the AY-102 LDP monthly for a variety of constituents and provide a draft report to Ecology within 15 days of sampling and a final report within 60 days. A risk exists that outages or other conflicts prevent WRPS from meeting those objectives.
AYSA-062	Risk	Open	Unable to Perform Waste Site Videos Bi-Weekly	WRPS	WRPS is required to perform video inspections of the known waste accumulation sites on a bi-weekly basis. A risk exists that conflicts within the tank farms or extended outages/work stoppages/restrictions prevent WRPS from meeting that